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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,744

11/20/2003

Felix M. Sciulli

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EXAMINER

PRONE, JASON D

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

07/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/717,744

Applicant(s)

SCIULLI ET AL.

Examiner

Jason Prone

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Appendix A 7-11-07

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warehime (5,782,673) in view of McDonnell et al. (5,591,184). See Appendix A.

In regards to claim 1, Warehime discloses the invention including a mixing tube comprising a body (472) having a bore extending there through along a longitudinal axis (138) and being formed to withstand the passage of a high-pressure fluid jet (Title), a collar (464), the collar being sized and capable of sliding upward through a bore of a cutting head (462) and having a terminal end surface of the collar substantially normal to the longitudinal axis to bottom out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis to prevent the mixing tube from being inserted any further into the cutting head (top surface of 464 bottoms out against the bottom surface of 456. Both are normal to 138), and the collar having opposing ends spaced from opposing terminal ends of the mixing tube (468 and top surface of 464).

In regards to claims 4-6, Warehime discloses the outer surface of the collar is substantially cylindrical (464), the outer surface of the collar is substantially frusto-conical (464), and the collar is surrounded by a nut (458).

However, in regards to claims 1 and 6, Warehime fails to disclose the collar is rigidly fixed to an outer surface of the mixing tube in an upper region of the tube prior to the mixing tube being installed in the jet system and the outer surface of the nut being threaded to engage a threaded inner surface of a cutting head.

McDonnell et al. teaches (using Appendix A) that it is old and well known in the art of fluid jet cutters to incorporate a collar that is rigidly fixed to an outer surface of the mixing tube in an upper region of the tube prior to the mixing tube being installed in the jet system (701) and the outer surface of the nut being threaded to engage a threaded inner surface of a cutting head (705). With regards to the collar, McDonnell et al. teaches it is old and well known for two commonly used parts of fluid jet cutters to be of a one-piece construction. Also, the frusto-conical portion of McDonnell et al. (701) is an equivalent to both the collar (464) of Warhime and the collar (58) in the instant application. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to provide Warhime with a rigidly fixed collar/mixing tube, as taught by McDonnell et al., to allow for the manufacturers to produce one big part instead of two different smaller parts.

3. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warehime in view McDonnell et al as applied to claim 1 above, and further in view of Yie (4,555,872). Warehime in view of McDonnell et al. disclose the invention but fail to disclose the distance from a top surface of the mixing tube to a bottom surface of the collar is 0.02-2.0 inches and the wall thickness of the collar is 0.01-0.2 inches. Yie (4,555,872) discloses specific dimensions for a fluid jet apparatus (Columns 16-17,

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example II). The support cone (60) with a passage (61) in Yie (4,555,872) is similar to inser (432) and passage (446) in Warehime and would, therefore, be on a similar order of size. Moreover, Yie (4,555,872) teaches a support cone/holder that has a diameter of 0.49 inches with a passage bore diameter of 0.15 inches. In view of the disclosed dimensions in Yie (4,555,872) and that the structure in Warehime and Yie (4,555,872) are on the same order, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have made the distance between the top surface of the mixing tube and a bottom surface of the collar in Warehime in view of McDonnell et al. 0.02-2.0 inches and the wall thickness of the collar 0.01-0.2 inches. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Additionally, to any degree that it can be argued that it is speculative that Warehime in view of McDonnell et al. is on the same order of size as the fluid jet apparatus in Yie (4,555,872), in view of their similarities in structure and function, such similarities in size would have been obvious to reproduce to meet established standards. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to have provided Warehime in view McDonnell et al. with the size limitations, as suggested by Yie, to allow the tube/collar combination to fit inside an apparatus requiring specific dimensions.

Response to Arguments

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4. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is (571) 272-4513. The examiner can normally be reached on 8:00-5:30, Mon - (every other) Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 19, 2007

Patent Examiner
Jason Prone
Art Unit 3724
T.C. 3700

Appendix A

